

WHAT IS CLAIMED IS:

1. A DSL modem apparatus comprising:
a controller that executes an initialization sequence, the sequence exchanging a predetermined signal prior to data communication;
a multiplier that multiplies transmission data of a sub-carrier by gain compensation data and phase angle compensation data, which are prepared for the same sub-carrier; and
a modulator that modulates a plurality of transmission data to be simultaneously transmitted in a plurality of sub-carriers.
2. The DSL modem apparatus according to claim 1, wherein said multiplier multiplies only transmission data of a predetermined signal of the initialization sequence, by the gain compensation data and the phase angle compensation data.
3. The DSL modem apparatus according to claim 2, wherein said multiplier multiplies only transmission data of a REVERB signal, by the gain compensation data and the phase angle compensation data, the REVERB signal being initially exchanged during the initialization sequence.
4. The DSL modem apparatus according to claim 1, wherein said multiplier multiplies transmission data of all signals, by the gain compensation data and the phase angle compensation data, the signals being exchanged during the initialization sequence.
5. The DSL modem apparatus according to claim 1, wherein said multiplier can use the gain compensation data and the phase angle compensation data that are individually generated corresponding to a plurality of distances.
6. A DSL modem apparatus comprising:
a controller that executes data communication;
a multiplier that multiplies transmission data of a sub-carrier by gain compensation data and phase angle compensation data, which are prepared for the same sub-carrier; and

a modulator that modulates a plurality of transmission data to be simultaneously transmitted in a plurality of sub-carriers.

7. The DSL modem apparatus according to claim 6, wherein said multiplier multiplies all transmission data, by the gain compensation data and the phase angle compensation data, the transmission data being transmitted during the data communication.

8. The DSL modem apparatus according to claim 6, wherein said multiplier can use the gain compensation data and the phase angle compensation data that are individually generated corresponding to a plurality of distances.

9. A communication control method comprising:
executing an initialization sequence that exchanges a predetermined signal prior to data communication;

 multiplying transmission data of a sub-carrier by gain compensation data and phase angle compensation data, which are prepared for the same sub-carrier; and
 modulating the multiplication results to be simultaneously transmitted in a plurality of sub-carriers.

10. A communication control method comprising:
executing data communication;
 multiplying transmission data of a sub-carrier by gain compensation data and phase angle compensation data, which are prepared for the same sub-carrier; and
 modulating a plurality of transmission data to be simultaneously transmitted in a plurality of sub-carriers.